AMENDMENT TO THE CLAIMS

Please cancel claims 4, 11, 14, 25-27, 33-36, 39, and 40.

Please amend claims 1, 5, 10, 15, 16, and 21 to read as follows:

1. (Currently Amended) A thermal switch, comprising:

a heat source;

a heat sink; and

at least one liquid-metal droplet disposed between the heat source and the heat sink, the droplet being configured to conduct heat from the heat source to the heat sink whenever the droplet is thermally coupled to the heat source and the heat sink, wherein at least one of the heat source and the heat sink comprises a micro-transducer.

2. (Original) The thermal switch of claim 1, wherein the droplet comprises mercury.

3. (Original) The thermal switch of claim 1, wherein the droplet is about 10 microns to about 1000 microns in diameter.

4. (Canceled)

5. (Currently Amended) [The thermal switch of claim 1, wherein] A thermal switch comprising:

a [the] heat source [comprises] comprising a first micro-transducer [and the];

a heat sink [comprises] comprising a second micro-transducer; and

at least one liquid-metal droplet disposed between the heat source and the heat sink, the droplet [transfers] being configured to transfer heat from the first

micro-transducer to the second micro transducer whenever the droplet is thermally coupled to the first micro-transducer and to the second micro-transducer.

6. (Original) The thermal switch of claim 5, wherein:

the droplet is in constant thermal contact with the first micro-transducer; and

the second micro-transducer comprises a deflectable member that deflects between a deflected position and a non-deflected position, wherein whenever the deflectable member is in the deflected position, the deflectable member contacts the droplet to allow heat to be conducted from the first micro-transducer to the second micro-transducer via the droplet, and whenever the deflectable member is in the non-deflected position, the deflectable member is spaced from the droplet to prevent heat from being conducted from the first micro-transducer to the second micro-transducer via the droplet.

7. (Original) The thermal switch of claim 5, wherein:

the first micro-transducer comprises a first micro-heat engine and the second micro-transducer comprises a second micro-heat engine; and

heat from the first micro-heat engine is transferred to the second micro-heat engine 5 whenever the droplet is thermally coupled to the first and second micro-heat engines.

8. (Original) The thermal switch of claim 7, wherein the first and second micro-heat engines are operable to convert heat energy into electrical energy.

9. (Original) The thermal switch of claim 5, wherein:

the first micro-transducer comprises a first micro-heat pump and the second micro-transducer comprises a second micro-heat pump, and

heat rejected by the first micro-heat pump is transferred to the second micro-heat pump whenever the droplet is thermally coupled to the first and second micro-heat pumps.

10. (Currently Amended) [The thermal switch of claim 1,] A thermal switch comprising:

a heat source;

a heat sink; and

at least one liquid-metal droplet disposed between the heat source and the heat sink, the droplet being configured to conduct heat from the heat source to the heat sink whenever the droplet is thermally coupled to the heat source and the heat sink, wherein[:] the droplet is in constant thermal contact with one of the heat sink and the heat source, and

the other of the heat sink and the heat source comprises an actuator that selectively thermally contacts the droplet, wherein the actuator comprises a flexible member that is selectively deflectable between a deflected position in which the flexible member contacts the droplet and a non- deflected position in which the flexible member is spaced from the droplet.

11. (Canceled)

12. (Canceled)

13. (Original) The thermal switch of claim 11, wherein the flexible member is an electrostatic transducer that deflects and contacts the droplet upon application of a voltage to the thermal switch.

14. (Canceled)

15. (Currently Amended) The thermal switch of claim 14, further comprising] an actuator that selectively thermally couples together the drop and the body.

16. (Currently Amended) [The thermal switch of claim 14, further comprising] A thermal switch for transferring heat into or away from a body comprising:

a first thermally conductive member; [and]

a second thermally conductive member; [wherein] and

at least one drop of liquid metal that transfers heat into or away from the body whenever the body is thermally coupled to the drop wherein the drop is disposed on the first thermally conductive member, and the second thermally conductive member is movable between a first position and a second position,

whenever the second thermally conductive member is in the first position, it contacts the drop, thereby allowing heat to be transferred into or away from the body through the thermal switch, and

whenever the second thermally conductive member is in the second position, it is spaced from the drop to minimize the transfer of heat into or a way from the body through the thermal switch.

17. (Original) The thermal switch of claim 16, wherein the second thermally conductive member is a deflectable member that is operable selectively to deflect toward and away from the first thermally conductive member such that, whenever the deflectable member deflects toward the first thermally conductive member, the deflectable member contacts the drop, and whenever the deflectable member deflects away from the first thermally conductive member, the deflectable member becomes spaced from the drop.

18. (Original) The thermal switch of claim 17, wherein:

the first thermally conductive member comprises at least one electrode; and

the second thermally conductive member comprises at least one electrode;

wherein application of a voltage to the electrodes generates an electrostatic charge that causes the second thermally conductive member to deflect toward the first thermally conductive member.

19. (Original) The thermal switch of claim 17, wherein:

the first and second thermally conductive members cooperatively form a fluid-tight cavity therebetween; and

an insulating gas is contained in the cavity.

20. (Original) The thermal switch of claim 19, wherein the insulating gas is argon.

21. (Currently Amended) The thermal switch of claim [14]16, wherein the body is a micro-transducer.

22-43. (Canceled)